Chapter 3. Year 2030 Conditions

This chapter identifies year 2030 conditions including socioeconomic projections, growth scenarios, no-build transportation conditions, and committed transportation improvements.

3.1 Year 2030 Socioeconomic Projections

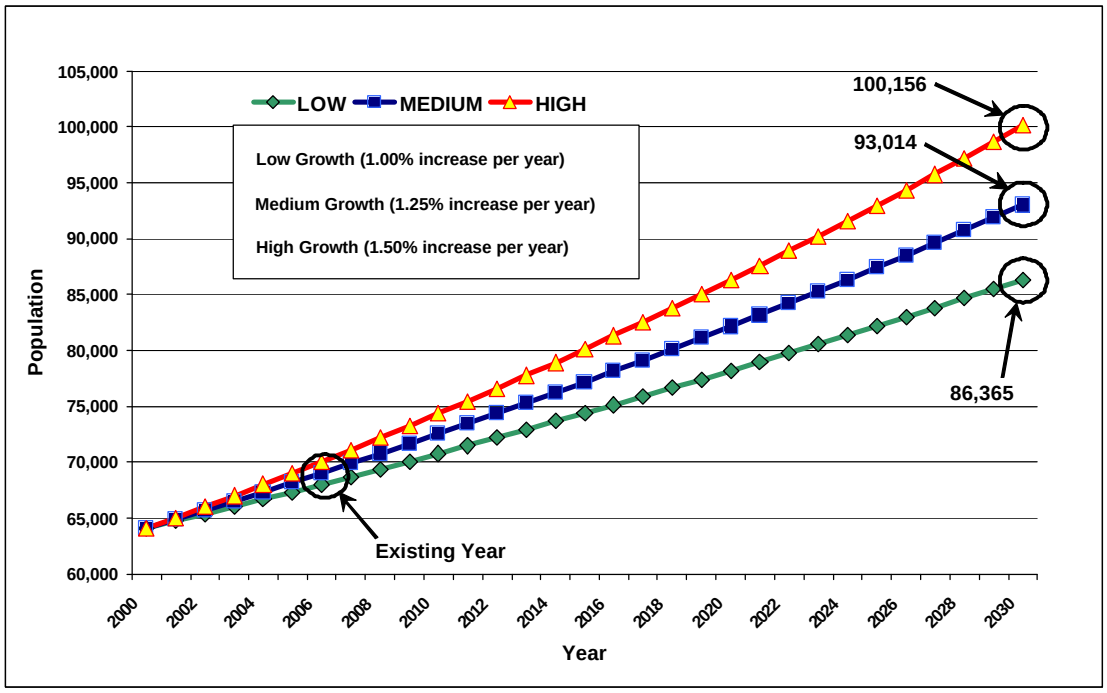
At the time *Connecting Casper* was being developed, the City of Casper, and surrounding communities including the Towns of Mills, Evansville, Bar Nunn, and Natrona County, was in the process of completing a Growth Management Plan for the Casper MPA. The Growth Management Plan, prepared by Worthington, Lenhart and Carpenter, Inc. (WLC), projected the number of new dwelling units, acres of new commercial development, and acres of new industrial development to the year 2025 for the fifty growth management areas.

3.1.1 2030 Growth Scenarios

To achieve consistency between plans, the 2025 Growth Management Plan development levels were used as a baseline to develop the 2030 LRTP growth projections. The 2025 Growth Management Plan used a 1.00% increase per year to project future year population. These projections were extended five years, at the same 1.00% increase per year, to reach the LRTP horizon year 2030. A similar process was used to extend commercial and industrial employment projections to the year 2030. For the purpose of the LRTP, the 1.00% increase per year represents the 2030 low growth scenario.

Two additional 2030 growth scenarios were also prepared for the LRTP to reflect a faster development rate. The medium growth scenario assumes a 1.25% increase in population per year while the high growth scenario assumes a 1.50% increase in population per year. Based upon these percentages, the 2030 population projection for the Casper MPA would be approximately 86,300 for the low growth scenario and approximately 100,100 for the high growth scenario. Figure 3-1 displays the year 2030 low, medium, and high growth population projections.

Figure 3-1. Year 2030 Casper MPA Population Projections



SOURCE: Casper Area Growth Management Plan and URS Corporation.

C:\Documents and Settings\jmeyer\My Documents\Casper LRTP\Pop and Employment Forecasts\[Pop and Employ Projections.xls]2030 projections

Conversion of Socioeconomic Data to Vehicular Trips

The 2030 socioeconomic data was used to generate and assign trips within the transportation network. For this process to occur, the socioeconomic data was allocated throughout the Casper MPA to traffic analysis zones (TAZ). A TAZ is a geographic area generally representing a small number of city blocks, neighborhoods, shopping areas, etc. The Casper MPA model contains of 304 TAZs. The Casper MPA TAZ network is displayed in the Appendix.

Each TAZ contains dwelling unit, employment, and school data. The first step in the data allocation was to identify which TAZs correspond to the growth management areas as identified in the Casper Area 2025 Growth Management Plan. The data for the fifty growth management areas was then allocated to the appropriate TAZs. The TAZs were reviewed to determine if a zone had sufficient capacity to accommodate additional growth and what type of growth (i.e., residential, commercial, and/or industrial) was most likely to occur. This process began by allocating the projected development for the low growth scenario. Once the low growth scenario was allocated, the incremental increase between the low growth and medium growth scenario was then allocated to the TAZs. The same process was then used to develop the high growth scenario. A summary of the 2030 growth scenario allocation is provided in Table 3-1.

Table 3-1. 2030 Growth Scenario Summary (Totals for Growth Scenarios)

Growth Area [1] Description	ID	Year 2025 Baseline			Year 2030 LOW GROWTH			Year 2030 MEDIUM GROWTH			Year 2030 HIGH GROWTH		
		New Dwelling Units	New Acres of Commercial	New Acres of Industrial	New Dwelling Units	New Acres of Commercial	New Acres of Industrial	New Dwelling Units	New Acres of Commercial	New Acres of Industrial	New Dwelling Units	New Acres of Commercial	New Acres of Industrial
Bar Nunn	1	500			700			900			1100		
Wardell	2	50			75			175		10.0	275		20.0
Soda Lake	3							150		10.0	250		20.0
Brooks Ranch	4	300			520			620			720		
Sunlight	5	10			10			10			10		
Evansville Growth	6	225			325			325			325		
Evansville North	7	150			150			300			425		
Sandy Lakes	8	150			150			150			150		
Brookhurst - Cole Creek	9	10		50.0	10		52.5	10		52.5	10		52.5
Former Texaco Refinery	10		10.0	10.0		10.5	10.5		10.5	10.5		10.5	10.5
Lathrop West	11		25.0			26.3			36.3			46.3	
Lathrop East	12			10.0			10.5			20.5			30.5
McMurry Business Park	13	200	75.0		200	78.8		200	98.8		200	118.8	
Blackmore Road West	14		20.0			21.0			31.0			41.0	
Elkhorn North	15	150			150			150			150		
Elkhorn South	16	300			300			300			300		
Belt Loop East	17							240			540		
402	18	350			350			400			450		
Country Club	19	285			385			435			560		
Beverly East	20	400			520			620			770		
Allendale	21	400			500			500			500		
Links View	22	400			500			500			500		
Spring Creek Ranches	23	20			20			45			70		
Lower Circle Drive	24	10			10			30			50		
Upper Circle Drive	25	10			10			30			50		
Dragon's Back	26	50			75			75			75		
Asbell	27	50			75			150			225		
Wolf Creek North / Mesa	28	200	25.0		200	26.3		200	26.3		200	26.3	
Squaw Creek	29	300	20.0		400	21.0		600	21.0		700	21.0	
Skyline Ranches and Westland Park	30	300			400			600			700		
Webb Creek	31	50			75			75			75		
Red Butte	32	25			25			25			25		
Dowler	33		15.0			15.8			25.8			35.8	
Dempsey and River Run	34	50			50			50			50		
Riverwest and Trails West	35	600			800			1050			1150		
Boatright	36												
Mountain View West	37	250			250			250			250		
Robertson Road East / Zero Road Industrial	38			15.0			15.8			25.8			35.8
Robertson Road West	39	50		10.0	75		10.5	425		20.5	625	10.0	30.5
Vista West	40			10.0			10.5			10.5			10.5
Westgate	41			20.0			21.0			21.0			21.0
Airport South	42			30.0			31.5			31.5			31.5
10 Mile Road	43			20.0			21.0			21.0			21.0
Airport	44			30.0			31.5			31.5			31.5
Casper Creek North	45												
Casper Creek Central	46	100			150			350			600		
North Mountain View	47	20			20			20			20		
Mills (Topaz)	48	60			85			135			210		
Salt Creek Heights Business Park	49			100.0			105.0			115.0			125.0
Platte River Commons	50		15.0			15.8			25.8			25.8	
	TOTAL	6,025	205.0	305.0	7,565	215.5	320.3	10,095	275.5	380.3	12,310	335.5	440.3
Target Population		86,365			93,014			100,156					
Average Household Size		2.12			2.12			2.12					
Target Dwelling Units		40,738			43,875			47,243					
Model Dwelling Units		40,736			43,866			47,231					
Model Commercial Employees			33,827			36,053			38,279				
Model Industrial Employees				7,398			8,430			9,462			
Model College Employees		750			780			810					
Model Total Employment		41,975			45,263			48,551					
Population-to-Employment Ratio		2.06			2.05			2.06					

(1) Growth Areas as defined by the "Annexation Study Additions - January 2006."

Updated: May 18, 2006

NOTE: A portion of the total dwelling units and employment is allocated to external zones which fall outside of the identified growth management areas.

NOTE: Red numbers indicate an increase over the previous growth scenario.

C:\Documents and Settings\jmeyer\My Documents\Casper LRTP\Model\[Growth Summary_July 2006.xls]Growth Summary for LRTP

3.2 Future Year Roadway Conditions

Year 2030 roadway conditions were analyzed for a no-build scenario and an existing plus committed transportation improvement scenario. Future year capacity deficiencies and other transportation related issues are identified for the Casper MPA roadway system. The following sections summarize the findings.

3.2.1 2030 No-Build Transportation Network

The 2030 no-build transportation network represents future year traffic conditions if no transportation improvements are made between the current year and year 2030. This model scenario serves as a year 2030 baseline condition from which all transportation improvement scenarios are compared. Below is a brief discussion of year 2030 no-build roadway conditions within the Casper MPA. Figures 3-2 to 3-4 display the projected locations with capacity concerns for the low, medium, and high growth scenarios. Year 2030 traffic volumes are provided in the Appendix.

I-25

I-25 traffic volumes through Casper currently average approximately 15,000 vehicles per day (vpd). Projected traffic volumes for a 2030 no-build low growth scenario show I-25 traffic volumes increasing to approximately 24,400 vpd while volumes for a high growth scenario are projected to more than double to 32,000 vpd.

CY Avenue

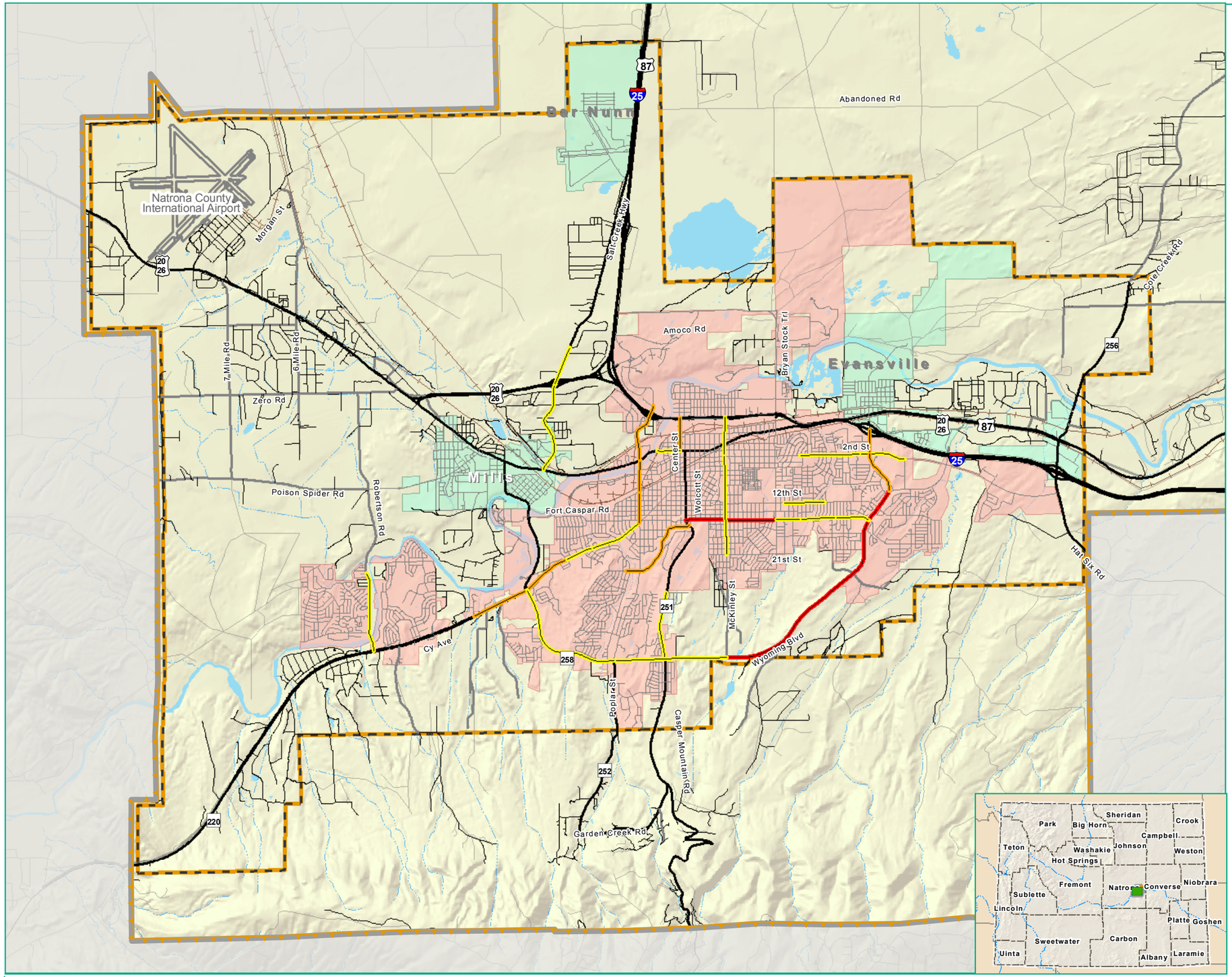
Existing traffic volumes on CY Avenue, just west of Wyoming Boulevard, average approximately 24,200 vpd. The 2030 no-build scenario indicates traffic volumes in the range of 37,600 vpd for a low growth scenario to 43,000 vpd for a high growth scenario. This increase is due to significant commercial development projected in the vicinity of CY Avenue and Wyoming Boulevard combined with projected residential development in the western portion of the Casper MPA.

Wyoming Boulevard

Current traffic volumes on Wyoming Boulevard, near 2nd Street, show traffic volumes exceeding 22,000 vpd. The 2030 no-build low growth scenario shows a significant increase in traffic volumes to approximately 39,400 vpd and to 50,500 vpd for a high growth scenario. Much of this increase is attributed to continued development along 2nd Street, including the industrial park, and projected residential growth in the southeast portion of the Casper MPA. The high growth scenario in particular anticipates a large increase in residential development in the southeast portion of the Casper MPA.

Poplar Street

Poplar Street, just south of the I-25 interchange, has existing traffic volumes of approximately 17,000 vpd. Under a 2030 no-build low growth scenario the volumes would be around 23,900 vpd to 29,400 vpd for a high growth scenario.



Legend

2030 LOS

- D
- E
- F

Roadway Jurisdiction

- State Highway
- County
- Local or Private
- City (Incorporated Only)

Railroads

- Main track
- Spur Track
- Urban Boundary
- Metropolitan Boundary
- Water

Miles

0 0.5 1

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2030 Connecting Casper
2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

2030 Level of Service: No-Build Network - Low Growth

Figure 3-2

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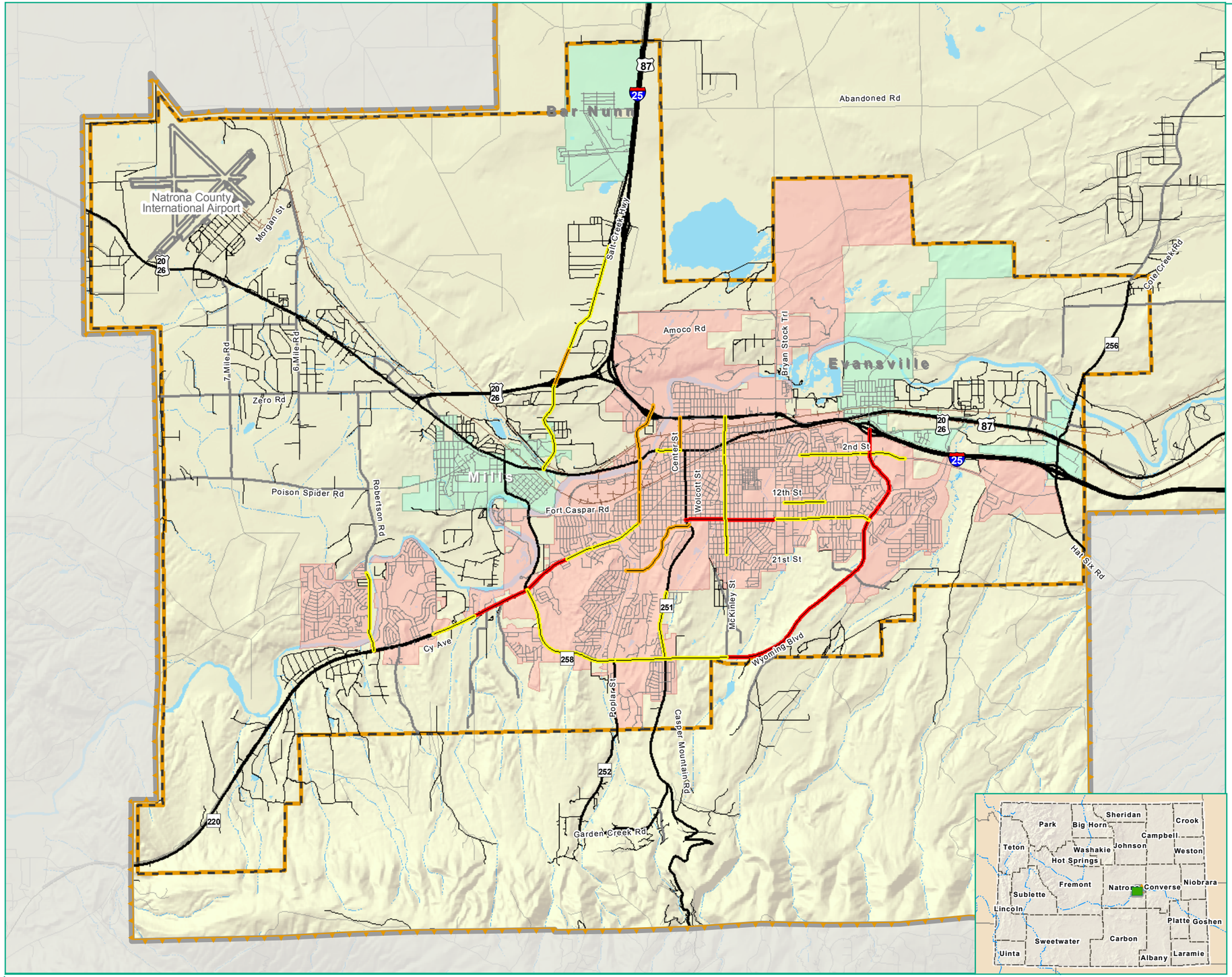

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2030 LOS

- D
- E
- F

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- City (Incorporated Only)

Railroads

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- Spur Track
- Urban Boundary
- Metropolitan Boundary
- Water

Miles

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2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

2030 Level of Service: No-Build Network - Medium Growth

Figure 3-3

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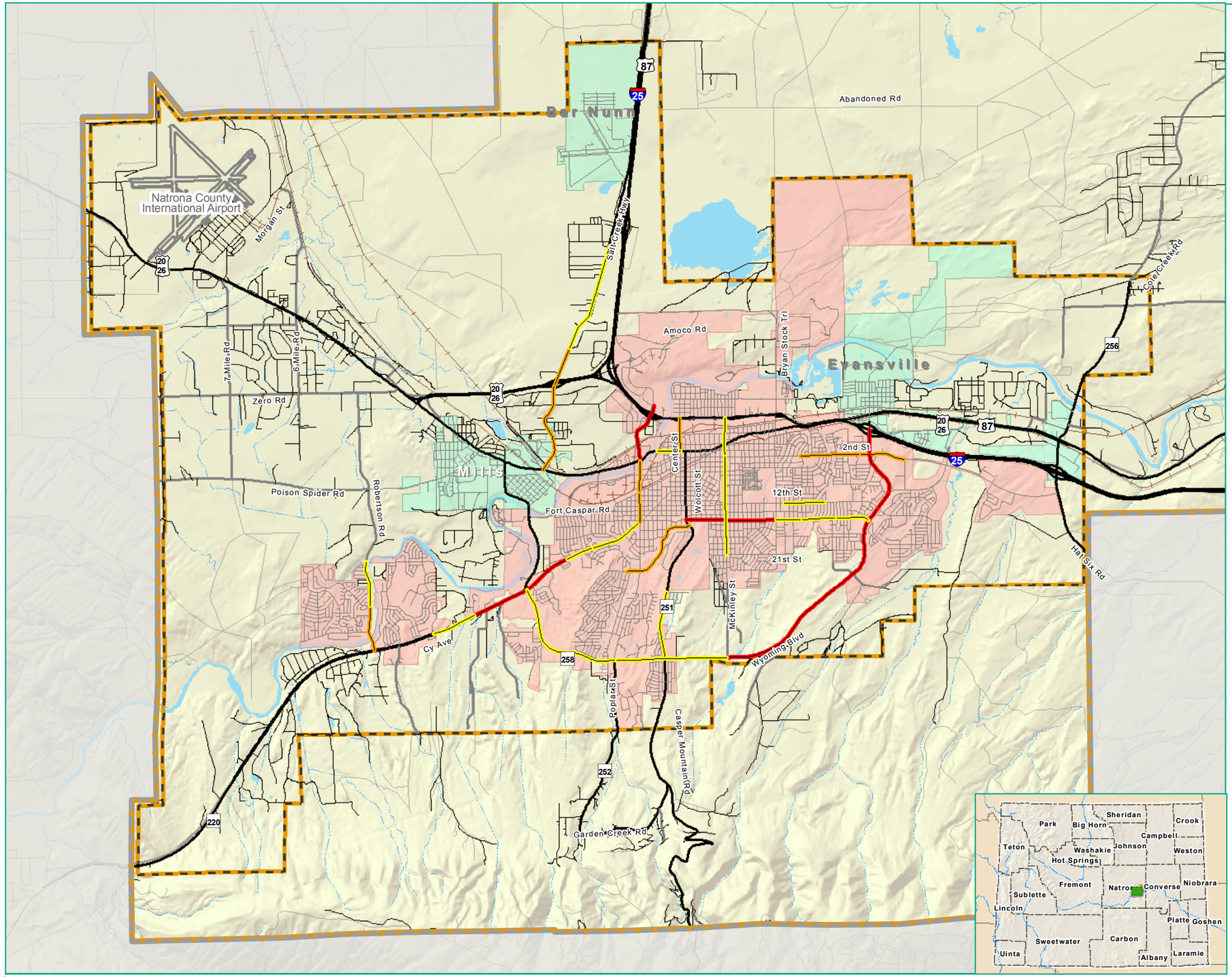

Legend

2030 LOS

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- State Highway
- County
- Local or Private
- City (Incorporated Only)

Railroads

- Main track
- Spur Track
- Urban Boundary
- Metropolitan Boundary
- Water

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Miles

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2030 Connecting Casper
2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

2030 Level of Service: No-Build Network - High Growth

Figure 3-4

URS

3.2.2 Existing + Committed Transportation Network

The 2030 Existing + Committed (E+C) transportation network represents future year traffic conditions if only transportation improvements for which funding has been identified are constructed by the year 2030. Table 3-2 summarizes committed roadway improvements as outlined in the Casper MPO Transportation Improvement Plan (TIP) and the WYDOT State TIP. The Casper MPO TIP covers the Fiscal Year (FY) 2006 to FY 2008 while the WYDOT STIP covers FY 2007 to FY 2012.

The most significant new construction included in the E+C network is the West Belt Loop. This improvement provides a regional connection in the western portion of the Casper MPA which has the potential to shift traffic away from other major roadways within the Casper MPA. Below is a summary of the 2030 traffic projections for select roadways included as part of the E+C network. Figures 3-5 to 3-7 display the 2030 capacity concerns for the low, medium, and high growth scenarios. Year 2030 E+C network traffic volumes are provided in the Appendix.

West Belt Loop

The 2030 E+C network includes the construction of the West Belt Loop which would connect CY Avenue to US 20/26 (Yellowstone Highway). The model results indicate that this facility could carry as high as 8,600 vpd under a low growth development scenario and as many as 17,000 vpd under a high growth development scenario. The West Belt Loop would divert trips away from other major roadways including CY Avenue and Poplar Street. In addition, the West Belt Loop has the potential to divert truck traffic away from downtown Casper and support development in the western portion of the Casper MPA.

CY Avenue

The 2030 no-build scenario indicates traffic volumes on CY Avenue, just west of Wyoming Boulevard, in the range of 37,600 vpd for a low growth scenario to 43,000 vpd for a high growth scenario. This increase is due to significant commercial development projected in the vicinity of CY Avenue and Wyoming Boulevard combined with the projected residential development in the western portion of the Casper MPA. The 2030 E+C network, with the addition of the West Belt Loop, shows a drop in traffic volumes along CY Avenue between approximately 2,400 vpd and 3,100 vpd depending on the growth scenario.

Poplar Street

Poplar Street, just south of the I-25 interchange, is projected to carry between 23,900 vpd and 29,400 vpd for a 2030 no-build scenario. With the addition of the West Belt Loop, it is projected that between 3,200 vpd (low growth development) and 4,700 vpd (high growth development) would be diverted away from Poplar Street.

Table 3-2. Committed Roadway Improvements (2007 to 2012 and Future Year Projects[1])

ID	Project	Lead Agency	Location From	Location To	Activity	Length (miles)	Cost ($1,000)
FISCAL YEAR: 2007 (Construction)							
1	Evansville Streets	Town of Evansville	E. Yellowstone Highway	Hat Six Road	Three Gateway Signs	0.0	146
2	Salt Creek Highway	Natrona County	at US 20/26 - US 20/26 Connector		Replace Slabs /Grind / Texture	1.4	255
3	Casper Streets	WYDOT	WYO- 254 / Salt Creek Highway		Install Two Platform Scales	0.0	391
4	Casper - Midwest Connector	WYDOT	at Oil Boom Town Site		Tourism Turnout	0.0	84
5	Mills Streets (1st Street)	Town of Mills	Excal Way	Wyoming Boulevard	Bike Path / Phase 2	0.7	268
					SUBTOTAL		***1,144***
FISCAL YEAR: 2008 (Construction and Engineering)							
6	Casper Mountain Road	WYDOT	Casper South / WYO-251		Drainage Repairs / Modifications	4.0	176
7	Hat Six Road	WYDOT	I-25 south	Future East Belt Loop Connection	Reconstruction / 5-lane	1.1	2,624
8	I-25	WYDOT	Hat Six Section	through Casper MPA	Overlay / 4R / ITS	9.9	19,781
					SUBTOTAL		***22,581***
FISCAL YEAR: 2009 (Construction and Engineering)							
9	West Yellowstone	City of Casper	David	Poplar	Reconstruction	0.0	4,111
10	West Belt Loop (Section 1)	WYDOT	US-20/26	Poison Spider Road	New Construction / Structures	0.0	20,000
11	Walsh Drive	City of Casper	Yellowstone	Post Office Road	New Construction	0.0	736
12	Casper Streets	City of Casper	Robertson Road Reconstruction	Buckboard north to city limits	Reconstruction	1.1	2,400
13	Casper Streets	City of Casper	Paradise Reconstruction		Reconstruction	1.0	3,200
					SUBTOTAL		***30,447***
FISCAL YEAR: 2010 (Construction and Engineering)							
14	Mills Streets (Yellowstone Highway)	Town of Mills	Wyoming Boulevard	WCL	Bike Path / Phase 3	0.1	275
					SUBTOTAL		***275***
FISCAL YEAR: 2011 (Construction and Engineering)							
16	Poison Spider Road	Town of Mills	West Yellowstone	Robertson Road	Reconstruction	1.8	3,000
17	CY Ave. / Poplar Street Intersection	WYDOT	CY Avenue	at Poplar Street	Reconstruct Intersection	0.0	2,818
					SUBTOTAL		***5,818***
FISCAL YEAR: 2012 (Construction and Engineering)							
18	Shoshoni Connector	WYDOT	at US-20/26 Spur		Reconstruction	2.9	9,500
19	Salt Creek Highway	WYDOT	WYO-254 / Salt Creek Highway	Shoshoni Connector	Reconstruction / 5-lanes	0.5	2,100
					SUBTOTAL		***11,600***
FISCAL YEAR: Future Year (Construction and Engineering)							
20	West Belt Loop (Section 2)	WYDOT	Poison Spider Road	CY Avenue	New Construction / Surfacing	0.0	19,300
21	Casper Outer Drive	WYDOT			Widen / Resurface	4.2	11,275
22	Bryan Stock Trail	City of Casper	Bryan Stock Trail Bridge	at Platte River	Remove / Widen	0.0	1,000
23	Poplar Street	WYDOT	I-25	south of 1st St. (including bridge)	Reconstruct / Turn Lanes / Bridge	1.2	17,285
24	Poplar Street	City of Casper	Poplar Street Bridge	at Platte River	Enhancements	1.2	250
25	Robertson Road	Natrona County	North City Limits	Poison Spider Road	Reconstruction	0.0	3,000
26	Casper Marginal	WYDOT			Enhancements	7.5	355
27	Casper Marginal	WYDOT	Yellowstone, Beverly, McKinley, and Center		New Construction / Structures	7.5	22,277
28	Casper Streets	City of Casper	Various Collector/Arterial Streets		Rotomill and Overlay	12.0	10,500
					SUBTOTAL		***85,242***

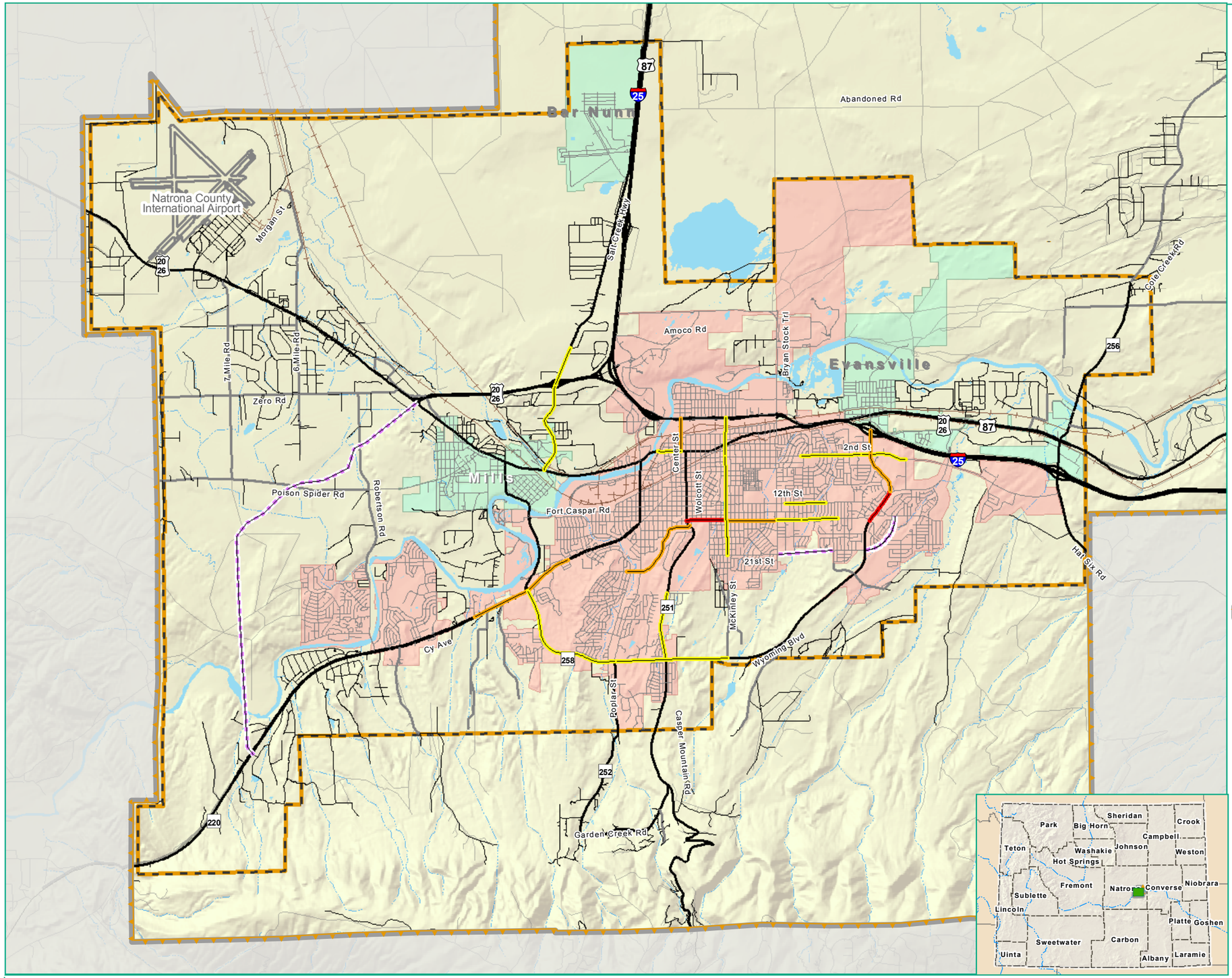
NOTES

[1] Future Year projects as identified in the WYDOT State Transportation Improvement Program (STIP) 2007.

TOTAL (2007 to 2012 Projects)	***71,865***
TOTAL (Future Year Projects)	***85,242***
TOTAL (2007 to 2012 and Future Year Projects)	***157,107***

SOURCE: WYDOT STIP 2007 (FY 2007 to FY 2012); Casper Area MPO TIP (FY 2007 to FY 2009).

C:\Documents and Settings\jmeyer\My Documents\Casper LRTP\Transportation Model\Roadways\[Roadway Improvements_STIP, TIP and future.xls]STIP and TIP (Nov 2006)



Legend

2030 LOS

- D
- E
- F
- Committed Construction

Roadway Jurisdiction

- State Highway
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- Local or Private
- City (Incorporated Only)

Railroads

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- Spur Track
- Urban Boundary
- Metropolitan Boundary
- Water

Miles

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2030 Connecting Casper
2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

2030 Level of Service: E+C Network - Low Growth

Figure 3-5

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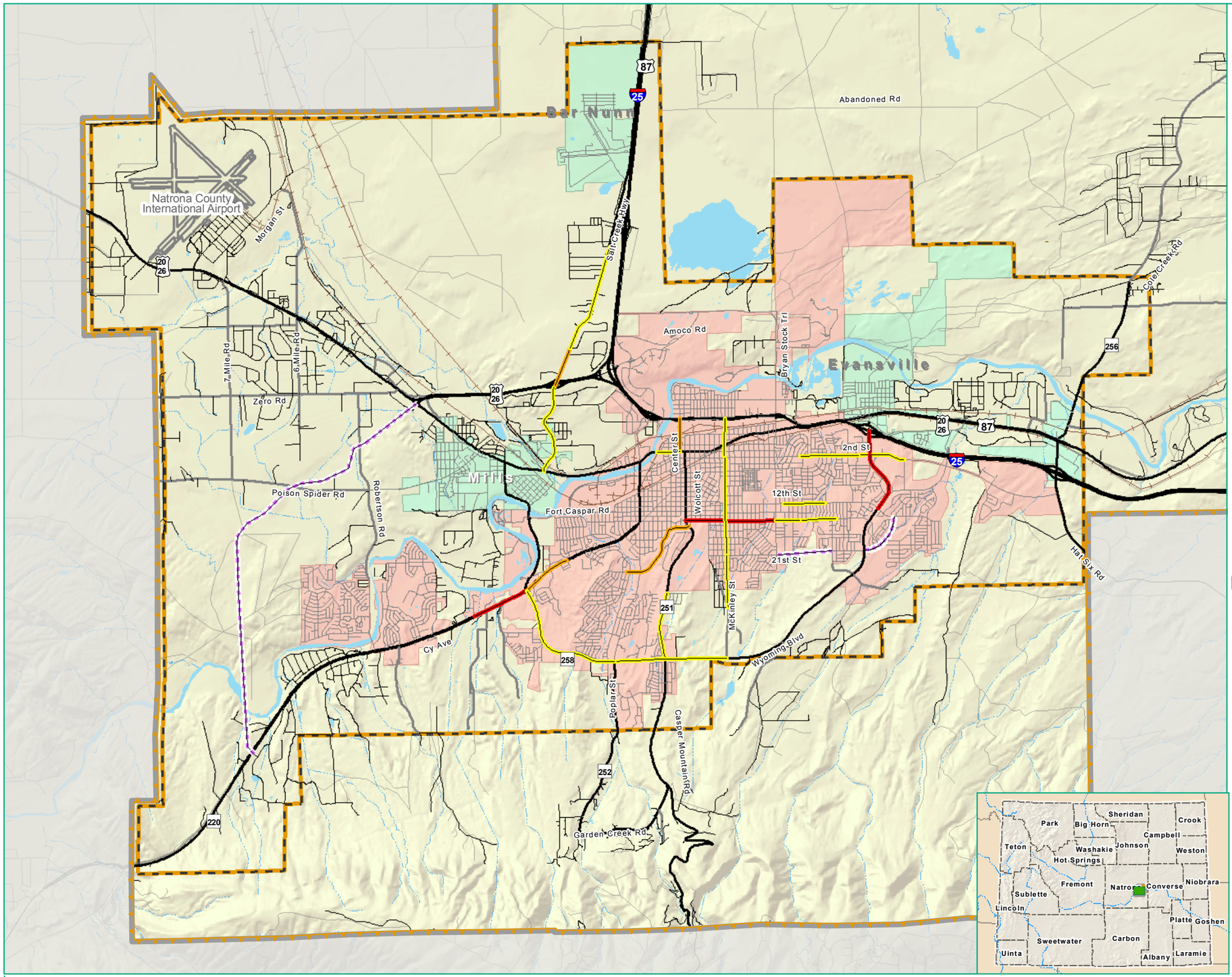

Legend

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- Metropolitan Boundary
- Water

Miles

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2030 Connecting Casper
2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

2030 Level of Service: E+C Network - Medium Growth

Figure 3-6

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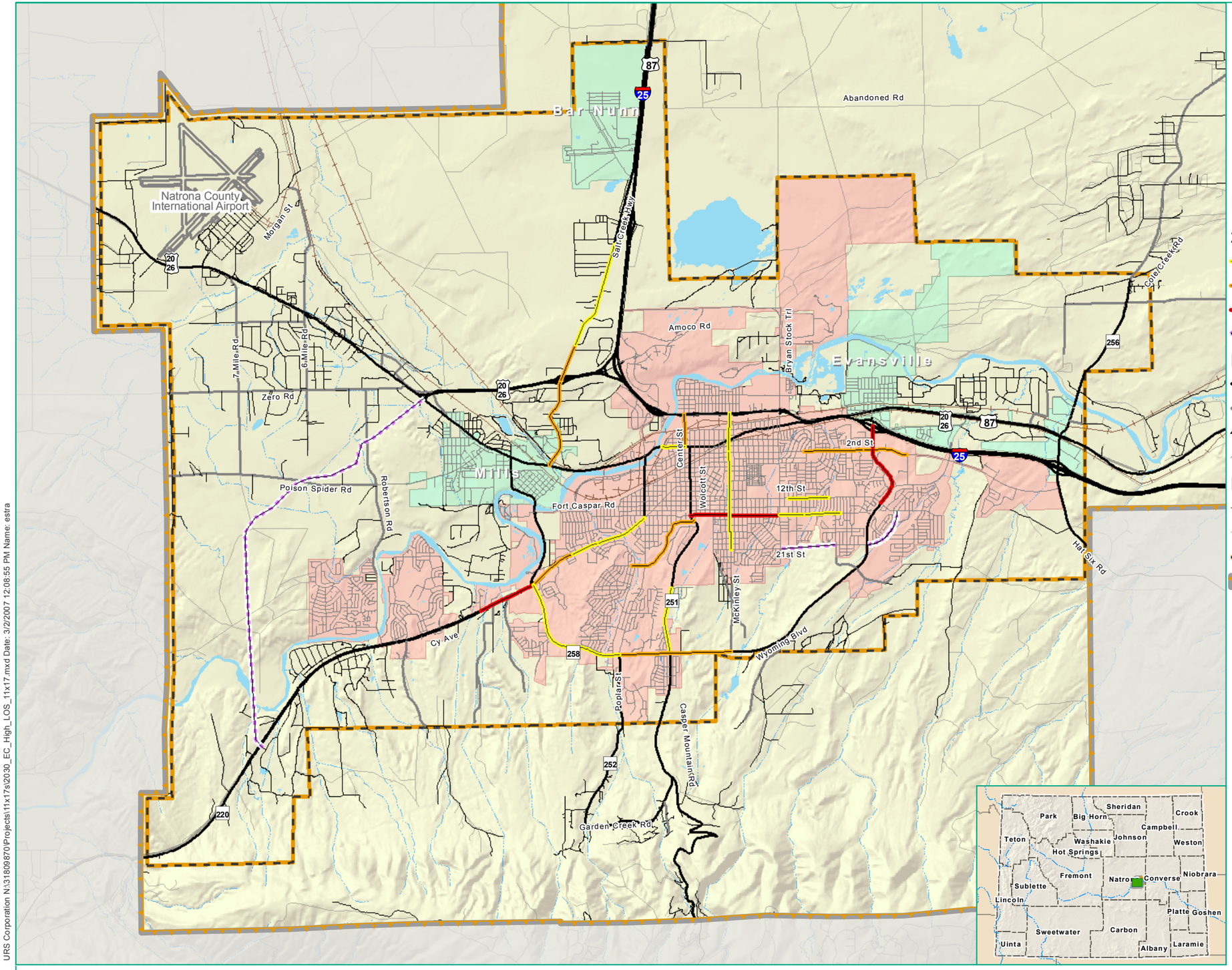

Legend

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Miles

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2030 Connecting Casper
2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

2030 Level of Service: E+C Network - High Growth

Figure 3-7

URS

3.2.3 Future Year Roadway Issues

The year 2030 traffic projections were used to identify potential capacity concerns and other transportation deficiencies. General planning level capacity thresholds, the same used for the existing conditions analysis, help identify potential year 2030 capacity problems. Table 3-3 summarizes the miles of congestion for the 2030 no-build and the 2030 E+C networks. Year 2000 congestion levels are also provided as a comparison.

Table 3-3. Year 2030 Capacity Levels – No-Build and E+C Network

	Capacity Level			
	Approaching-Capacity	At-Capacity	Over-Capacity	
Scenario / Network	(LOS D)	(LOS E)	(LOS F)	TOTAL
Year 2005 - Existing				
	12.0	1.1	0.6	13.7
Year 2030 - No-Build				
Low Growth	14.2	6.1	5.0	25.3
Medium Growth	15.9	4.1	7.6	27.6
High Growth	13.0	6.8	8.5	28.2
Year 2030 - E+C Network				
Low Growth	11.8	5.1	1.1	18.0
Medium Growth	13.6	3.1	3.4	20.2
High Growth	9.5	7.7	3.4	20.6

SOURCE: URS Corporation

Under a 2030 no-build scenario, miles of congestion could almost double from existing levels to total approximately 25 to 28 miles depending on the growth scenario. When the committed projects are included in the transportation model, the overall miles of congestion for the three growth scenarios drop by approximately 7 or 8 miles. More importantly, it is worth noting that even with the committed roadway improvements, the E+C network would still have a total of 4 to 6 miles more congestion as compared to the existing year conditions.

<u>Summary of Roadway Findings</u>

The following issues were identified as part of the year 2030 roadway analysis.

<u>West Belt Loop</u>

The major improvement in the E+C transportation network is the West Belt Loop extending from CY Avenue to US 20/26 (Yellowstone Highway). An analysis of the 2030 traffic volumes shows that the West Belt Loop has the potential to carry between 8,600 vpd for a low growth scenario and as high as 17,000 vpd for a high growth development scenario. The West Belt Loop also diverts traffic away from CY Avenue and Poplar Street helping alleviate projected traffic congestion. The West Belt Loop would also be beneficial in shifting truck traffic away from CY Avenue and Poplar Street.

Robertson Road

The construction of the West Belt Loop and projected development in the western portion of the Casper MPA indicate a need to upgrade existing roadways such as Robertson Road. Robertson Road, near the planned intersection with the West Belt Loop, is projected to carry as high as 8,800 vpd which would operate at LOS D without any improvements.

CY Avenue and Wyoming Boulevard

Projected traffic levels and congestion in the vicinity of CY Avenue and Wyoming Boulevard is a concern given projected development levels including the new WalMart. Traffic levels on CY Avenue range between 37,600 vpd for a low growth scenario to 43,000 vpd for a high growth scenario. Improvements in this area will be needed to adequately accommodate future year traffic levels.

2nd Street and Wyoming Boulevard

Projected traffic congestion in the vicinity of Wyoming Boulevard and 2nd Street is a major concern for all the growth scenarios. Development in the areas east and southeast of this intersection will add to the traffic levels which could approach 50,000 vpd in the year 2030 under a high growth development scenario. These traffic levels and the resulting increase in congestion need to be addressed as part of a long-term solution to accommodate future development and projected traffic levels.

Wyoming Boulevard

Wyoming Boulevard from McKinley Street to 15th Street (currently two-lanes) is shown to operate over-capacity in the year 2030. The two-lane segment of Wyoming Boulevard would need to be widened to accommodate projected traffic levels as high as 25,000 vpd under a high growth E+C network.

Poplar Street

Projected traffic levels along Poplar Street indicate a need for transportation improvements. The capacity of the Poplar Street bridge, over the Platte River at 1st Street, is currently four-lane and experiences congestion during peak travel periods. Year 2030 traffic volumes, just south of the I-25 interchange, is projected to carry between 23,900 vpd and 29,400 vpd for a 2030 no-build scenario. The increase in traffic levels will add to the congestion at the intersection of Poplar Street and 1st Street.

15th Street

15th Street is a significant east-west roadway within the Casper MPA that carries local and through traffic. Future year traffic projections show continued traffic congestion in the year 2030. Traffic volumes in the vicinity of Casper College are close to 16,600 vpd for a high growth scenario. The current intersection configuration at 15th Street and McKinley Street is a location in need of improvements to better accommodate traffic flow. Given that there are limited east-west regional roadway connections south of 15th Street, it is important to identify improvements to eliminate or minimize traffic congestion along this corridor. The development of the 21st Street extension may help reduce trips along 15th Street.

Arterial Roadways

The projected growth for the Casper MPA will require the development of the arterial roadway system in areas such as the southeast, north, and northwest portion of the Casper MPA. As development occurs north of I-25, better north-south arterial connections will be needed. Specifically, the extension of Bryan Stock Trail could support future development and should be evaluated as a possible way to improve north-south traffic flow throughout the Casper MPA.

Salt Creek Highway

Year 2030 traffic levels along Salt Creek Highway show portions of this roadway operating at LOS D and LOS E. With projected development for the northwest portion of the Casper MPA, upgrades to Salt Creek Highway will be needed. Additional roadway improvements in this area should also be explored to better accommodate future traffic levels.

Interstate-25

Year 2030 traffic levels along I-25 are expected to range between 24,400 vpd for a low growth scenario and 32,000 vpd for a high growth scenario. General level of service planning thresholds indicate that future year traffic levels along I-25 will operate at acceptable standards. However, the existing design concerns (i.e., closely spaced ramps, short on-ramps and off-ramps, etc) highlight the need for improvements along the I-25 mainline and ramps to more effectively and safely accommodate the projected increase in traffic levels. In particular, I-25 is the primary corridor for freight traffic in the Casper MPA and as such this facility should receive special consideration.

12th / 13th Street One-Way Pair

Projected traffic volumes along the 12th / 13th Street one-way pair, between CY Avenue and McKinley Street, are generally about the same as existing volumes. This could be a result of the improvements identified in the Southeast Casper Transportation Study that provides additional east-west roadways south of 15th Street. The 12th / 13th Street one-way pair does have other concerns including high travel speeds through this neighborhood setting. Improvements aimed at calming traffic should be evaluated. One possible improvement that should be considered is converting this one-way pair to two-way traffic operation which could naturally slow travel speeds.

3.3 Future Year Transit Conditions

The fixed-route transit service has been in place for approximately one year at the time of this LRTP. Early indications from The Bus show that the fixed-route service has doubled overall transit ridership and is well received by area residents. On-going modifications to the system have been beneficial and demand response service has been gradually declining as more individuals become familiar with the fixed-route system.

3.3.1 Committed Improvements

The most significant transit related improvement is the planned addition of fixed-route service to the Towns of Mills and Evansville. These two new routes are planned to begin operation in 2007. This will bring the total number of fixed-routes in the Casper MPA to six. Another short-term improvement is the addition of weekend service as CATC has received a grant to start weekend service.

3.3.2 Year 2030 Service Coverage

Transit service coverage for The Bus was evaluated to determine what percentage of the year 2030 Casper MPA population and employment would have access fixed-route transit service. The service coverage analysis includes the new fixed-route service planned for the Towns of Mills and Evansville in 2007. The following analyzes year 2030 transit service coverage in proximity to residential destinations (population) and non-residential destinations (employment).

Proximity to Residential Destinations

Transit service coverage in proximity to residential destinations was evaluated using GIS applications to compare the fixed-route transit coverage, including the Mills and Evansville routes, to the year 2030 population that could potentially use fixed-route transit. A ¼-mile buffer (to represent the approximate walking distance to a transit stop) on each side of the transit routes was applied to identify the future year service area coverage.

The transit coverage, for a 2030 low growth scenario, shows that approximately 72% of the areas population would be within a ¼-mile of fixed-route transit service. This is a good capture rate for an area the size of the Casper MPA. Under a medium growth scenario the transit capture rate would drop to 67% while a high growth scenario would drop to 63%. The reason the fixed-route capture rates drop as population increases is that the extra population included in the medium and high growth scenarios is generally allocated on the fringe areas of the MPA as less developable land is available in the central part of Casper MPA. If the Casper MPA grows at the high rate, added pressure is placed on the fixed-route service to provide coverage to the fringe areas. The projected 2030 population, and estimated population with ¼-mile of fixed-route transit service, is displayed in Table 3-4. Figure 3-8 displays the transit service ¼-mile coverage area for the year 2030 medium growth scenario.

Table 3-4. Year 2030 Fixed-Route Residential Service Coverage

1/4-Mile Fixed-Route Service Coverage	Year 2000	Year 2030 Projections		
		Low Growth	Medium Growth	High Growth
Total Population	61,972	86,365	93,014	100,156
Total - Existing Route Coverage	31,829	57,554	57,919	58,135
Percentage - Existing Route Coverage	51.4%	66.6%	62.3%	58.0%
Total - Existing Route Coverage including New Routes	35,617	62,191	62,657	63,028
Percentage - Existing Route Coverage including New Routes	57.5%	72.0%	67.4%	62.9%
Total - Potential Increase with Mills and Evansville Routes	3,788	4,637	4,739	4,893
Percentage - Potential Increase with Mills and Evansville Routes	11.9%	8.1%	8.2%	8.4%

SOURCE: URS Corporation
NOTE: Population data from travel demand forecasting model.

Proximity to Non-Residential Destinations

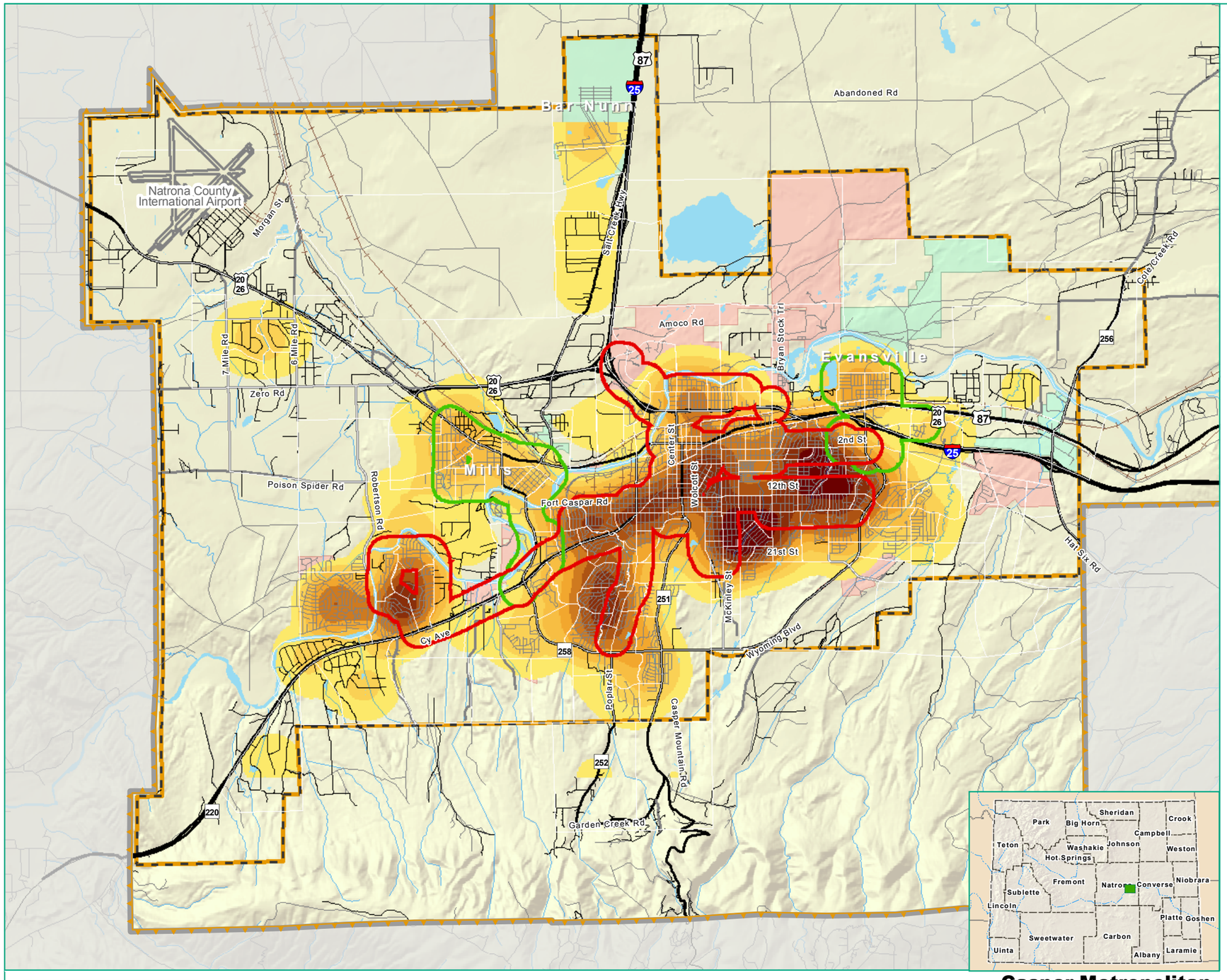
Transit service coverage in proximity to non-residential destinations (i.e., major or large employers, shopping areas, etc.) was evaluated to identify the approximate number of year 2030 employees that could use fixed-route service in the Casper MPA. A ¼-mile buffer (to represent the approximate walking distance to a transit stop) on each side of the transit routes was applied to represent both existing and planned fixed-route coverage.

Under the 2030 low growth scenario, approximately 65% of employees within the Casper MPA would have access to fixed-route service. The medium growth scenario has a fixed-route transit capture rate of 63% while a high growth scenario has a capture rate of 61%. Similar to the future year population, the employee capture rate drops as the growth rate increases. This is a result of new developments occurring on the fringe areas of the MPA. Table 3-5 summarizes the year 2030 fixed-route transit service coverage for non-residential locations within the Casper MPA. Figure 3-9 displays the transit service coverage in proximity to employment within the Casper MPA for the year 2030 medium growth scenario.

Table 3-5. Year 2030 Fixed-Route Non-Residential Service Coverage

1/4-Mile Fixed-Route Service Coverage	Year 2000	Year 2030 Projections		
		Low Growth	Medium Growth	High Growth
Total Employment	25,143	41,975	45,263	48,551
Total - Existing Route Coverage	12,179	24,083	25,108	25,817
Percentage - Existing Route Coverage	48.4%	57.4%	55.5%	53.2%
Total - Existing Route Coverage including New Routes	14,193	27,141	28,433	29,418
Percentage - Existing Route Coverage including New Routes	56.5%	64.7%	62.8%	60.6%
Total - Potential Increase with Mills and Evansville Routes	2,014	2,482	2,725	2,995
Percentage - Potential Increase with Mills and Evansville Routes	16.5%	10.3%	10.9%	11.6%

SOURCE: URS Corporation
NOTE: Employment data from travel demand forecasting model.



Legend

Population Density

- High
- Medium
- Low

- 1/4 Mile Proposed Transit
- 1/4 Mile Existing Transit

Roadway Jurisdiction

- State Highway
- County
- Local or Private
- City (Incorporated Only)

Railroads

- Main track
- Spur Track
- Water
- Urban Boundary
- Metropolitan Boundary

N

Miles

0 0.5 1 2

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2030 Connecting Casper
2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

2030 Fixed-Route Residential Service Coverage (2030 Medium Growth Scenario)

Figure 3-8

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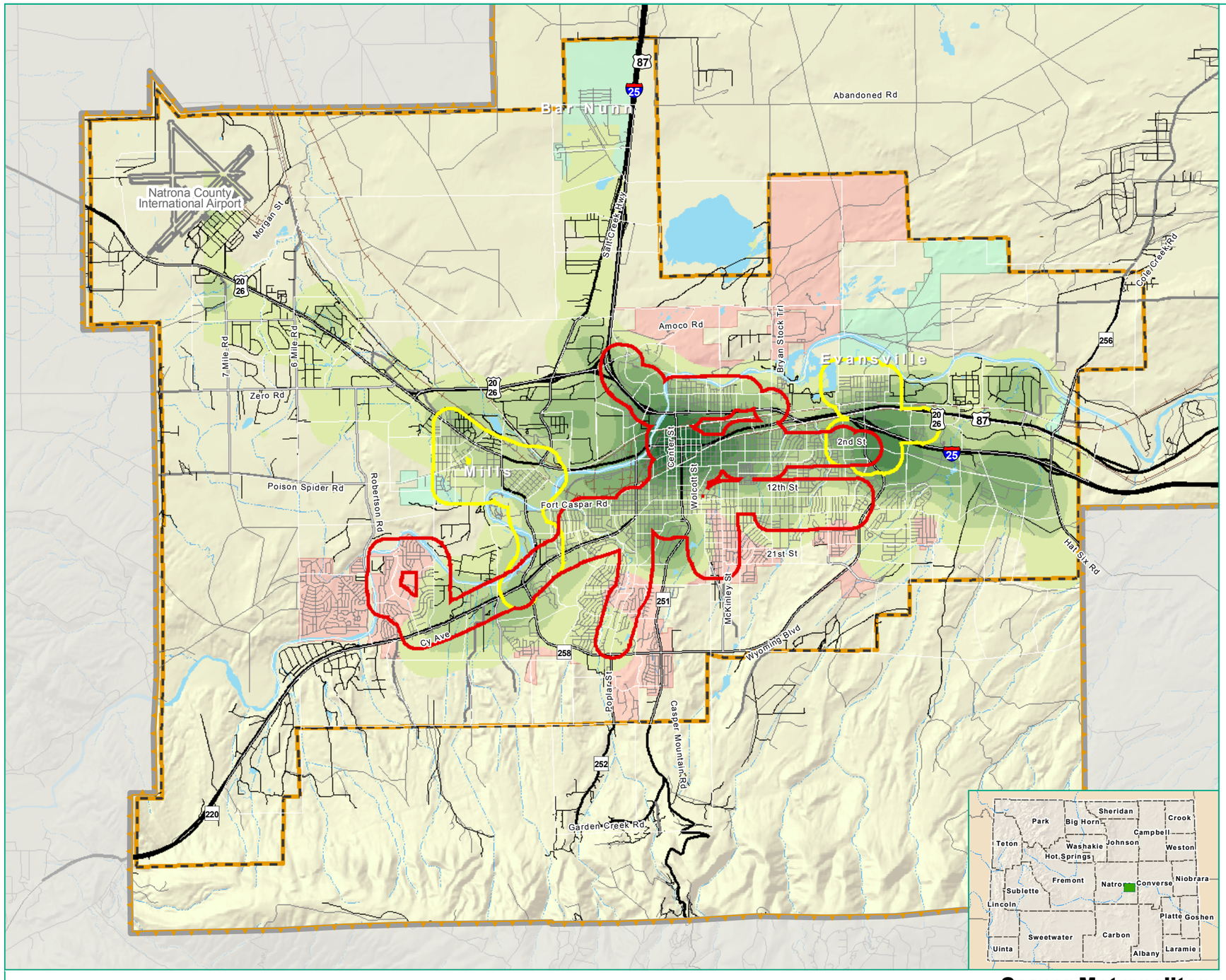

Legend

Employment Density

- High
- Medium
- Low

- 1/4 Mile Existing Transit
- 1/4 Mile Proposed Transit

Roadway Jurisdiction

- State Highway
- County
- Local or Private
- City (Incorporated Only)

Railroads

- Main track
- Spur Track
- Water
- Urban Boundary
- Metropolitan Boundary

Miles

0 0.5 1 2

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2030 Connecting Casper
2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)
Fixed-Route Non-Residential Service Coverage (2030 Medium Growth Scenario)

Figure 3-9

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3.3.3 Future Year Transit Issues

CATC has had a long history of providing public transportation services throughout the Casper MPA having developed from a demand response system to most recently the implementation of a fixed-route/route-deviation system in April 2005. Ridership data from the first year of the fixed-route service is very encouraging and the additional operations to the Towns of Mills and Evansville should further enhance the transit system. Future year transit issues are summarized in the following.

Service Expansion

With the expanding service and increasing ridership comes demands for weekend service, later evening service, and the need for service modifications to best accommodate as many area residents as possible. Increased demand must be met with increased service that does not significantly disrupt transit schedules and potential transfers to other routes.

Increasing Service Costs

Increasing costs, primarily related to increasing fuel costs, are a concern. Given the recent success of the fixed-route service it is important to maintain costs to avoid potential service cuts and/or fare increases.

Developing Areas

Current, and projected, development throughout the Casper MPA is a concern as population and employment centers are pushed to the fringe areas. In the City of Casper, development on the west side of town, including the new WalMart at CY Avenue and Wyoming Boulevard, will be served by the Town of Mills fixed-route service. Developing areas in the east and southeast portion of the Casper MPA, primarily east of Wyoming Boulevard, are just beyond existing fixed-route service. Extending fixed-route service to areas east and southeast of Wyoming Boulevard may be challenging as any significant increase in the route length could make it difficult for buses to maintain their schedules.

To the north, the Town of Bar Nunn is experiencing significant growth with over 500 new residential units projected by the year 2030. The Town of Bar Nunn could be the next logic area to implement fixed-route service. Another important factor to consider is that as the area grows, both residential and employment, the transit service must play a role in connecting Casper MPA residents to jobs. The non-residential capture rate for the year 2030 ranged between 61% and 65%. While this is a good capture rate, the more important consideration will be does the fixed-route transit service connect employees with employers. For example, the current fixed-route service does not run to the Natrona County International Airport and the adjacent business park. These challenges that will need to be addressed.

Aging Population

In general, a growing concern across the United States is an aging population who relies on alternative transportation modes, primarily fixed-route transit and demand responsive services. While Wyoming is currently ranked 50th with approximately 57,700 individuals over age 65, by percentage, Wyoming is ranked 38th with 11.7 percent of the population over age

65 (U.S. Census Bureau, 2001, Table P12). Year 2030 US Census projections show that 26.5 percent of Wyoming's population will be 65 and older. When combined with the population projection for those under 18, another age group that relies on transit, the total percentage of these two groups represents 46% in year 2030. This 2030 projection is up from the current percentage of these two groups which totals approximately 38%. Table 3-6 displays the US Census projections for the Sate of Wyoming. While no specific projections are provided for the Casper Area, it is anticipated that that Casper Area would be consistent with the projections for the State. Future transit planning will have to consider the needs of these populations and the system's connectivity between residential areas and destinations for work, shopping, and medical facilities.

Table 3-6. Year 2030 Population Projections for Wyoming (Under Age 18 and 65 and Older)

	Under 18		65 and Older		Combined Total	
Year	Population	Percentage	Population	Percentage	Population	Percentage
2000	128,873	26.1	57,693	11.7	186,566	37.8
2010	116,273	22.4	72,658	14.0	188,931	36.3
2030	99,997	19.1	138,586	26.5	238,583	45.6

C:\Documents and Settings\jmeyel\My Documents\Casper LRTP\Pop and Employment Forecasts\[under 18 and over 65 - age.xls]Tab5

SOURCE: US Census Bureau, Population Division, Interim State Population Projections, 2005.

Internet Release Date: April 21, 2005

3.4 Future Year Non-Motorized Conditions

The Casper MPA is fortunate to currently have many well developed and maintained non-motorized facilities. Local agencies and area residents are very involved in the planning and development of many pathway and trail systems. The Platte River Parkway and the Casper Rail Trail will continue to be the primary non-motorized system elements. Some additional future year non-motorized concerns include the following.

3.4.1 Committed Projects

The current trail crossing at Beverly Street is at-grade where the roadway is four-lanes with heavy traffic volumes and high travel speeds. In the Summer 2006, an underpass at this location was constructed to provide a safe connection across Beverly Street. Before the underpass is opened to non-motorized travel, additional funding is needed to prepare the approaches to the underpass on both the east and west sides of Beverly Street. Figure 3-10 displays the Beverly Street Crossing.

Figure 3-10. Beverly Street Crossing

An underpass was installed in Summer 2006 along the Casper Rail Trail at Beverly Street. The approaches will be completed when funding becomes available.

Safe Routes to Schools

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU) recognizes the importance of bicycling and walking by establishing the Safe Routes to Schools (SRTS) program. The SRTS program is a Federal-Aid program created by Section 1404 of The SRTS program is funded at nationwide total of $612 million over five Federal fiscal years (FY 2005-2009) and is administered by WYDOT. The five-year total for the State of Wyoming is just under $5,000,000 (approximately $1,000,000 per year). The SRTS program provides funds to improve the ability of primary and middle school students to walk and bicycle to school safely. The primary purposes of the program, as identified by FHWA, are:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school.
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8).

To help identify potential locations for Safe Routes to Schools funding, a review of the area schools was compared to sidewalk and park data available in the Casper MPO GIS database. Table 3-7 displays the results when a ½-mile buffer is placed around existing schools to determine the park acreage and miles of sidewalks currently within the buffer. The schools were then ranked by each category and a combined rank was then calculated. The information presented here could be helpful in identifying specific locations within the Casper MPA where Safe Routes to Schools funds could be used to enhance and improve pedestrian and bicycle accessibility. It should be pointed out that Safe Route to Schools emphasizes facilities near elementary schools. The analysis below includes all schools within the Casper MPA.

Table 3-7. Park Acreage and Sidewalks within ½-Mile of Schools

	Sidewalks		Parks		
School	Miles	Rank	Acreage	Rank	Combined Rank
Bar Nunn Elem	1.9	29	0.0	29	58
Evansville School	5.8	27	0.0	28	55
Mountain View Elem	8.3	26	4.5	23	49
Sagewood Elem	18.0	20	1.3	27	47
University Park Elem	15.4	23	8.4	21	44
Paradise Valley Elem	16.7	21	14.5	19	40
Centennial Jr High	23.3	15	7.2	22	37
Mills School	3.9	28	48.8	9	37
Verda James Elem	20.9	19	17.1	16	35
Oregon Trail Elem	16.7	22	28.1	12	34
Fort Caspar School	14.1	24	66.6	7	31
Crest Hill Elem	10.9	25	69.2	5	30
Roosevelt School	26.0	12	14.7	18	30
Dean Morgan Junior High School	48.4	3	2.6	26	29
CY Jr High	21.8	18	44.9	10	28
Woods Elem	24.5	13	20.7	15	28
Manor Heights Elem	22.9	16	28.6	11	27
Natrona Co High	54.0	2	4.1	24	26
Park School	57.1	1	4.0	25	26
Pineview School	31.9	8	15.1	17	25
McKinley School	43.7	4	14.0	20	24
Kelly Walsh High	31.3	9	21.7	14	23
Westwood School	28.8	10	24.3	13	23
Southridge School	23.4	14	67.8	6	20
North Casper School	21.8	17	125.9	2	19
Willard School	32.9	7	61.1	8	15
East Junior High School	27.2	11	133.3	1	12
Grant School	36.2	6	88.5	4	10
Casper College	38.3	5	90.8	3	8

SOURCE: URS Corporation

C:\Documents and Settings\jmoyle\My Documents\Casper LRTP\[Updated Miles of Congestion 10-25-06.xls]sidewalks and parks (Feb 2007)

Public Schools
1 Bar Nunn Elem
2 Centennial Jr High
3 Crest Hill Elem
4 CY Jr Hi
5 East Junior High School
6 Evansville School
7 Fairdale School
8 Fort Caspar School
9 Garfield School
10 Grant School
11 Verda James Elem
12 Jefferson School
13 Manor Heights Elem
14 McKinley School
15 Mills School
16 Dean Morgan Junior High
17 Mountain View Elem
18 Natrona Co High
19 North Casper School
20 Oregon Trail Elem
21 Paradise Valley Elem
22 Park School
23 Pineview School
24 Roosevelt School
25 Sagewood Elem
26 Southridge School
27 University Park Elem
28 Kelly Walsh High
29 Westwood School
30 Willard School
31 Woods Elem

Legend

- School Land
- Park Land
- Walk Way
- Improved Trail

Railroads

- Main track
- Spur Track
- Urban Boundary
- Water

Natrona

Miles
0 0.25 0.5

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2030 Long Range Transportation Plan

Casper Area MPO

Casper Metropolitan Planning Area (MPA)

Safe Routes to Schools

Figure 3-11

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3.4.2 Future Year Non-Motorized Issues

The projected growth within the Casper MPA places greater emphasis on developing a non-motorized system that serves existing and future Casper MPA residents. While the region currently has many well established trails, it is important over the next twenty-five years that the Casper MPA continues to plan, construct, and maintain non-motorized facilities, including the addition of on-street facilities. Future year non-motorized issues are summarized in the following.

On-Going Maintenance

It is important that the local communities and Platte River Parkway continue to maintain and enhance the existing trail system and other bicycle facilities. As with most transportation modes, increasing maintenance costs are a concern. Maintaining the primary non-motorized facilities, the Platte River Parkway and the Casper Rail Trail, are important to the Casper MPA.

Trail Expansion

The two primary trail facilities, Platte River Parkway and Casper Rail Trail, connect communities including the City of Casper, Town of Mills, and Town of Evansville. These communities are all located directly along the Platte River and provide connections to major attractions. Areas to the north, including Bar Nunn which is not connected to the Platte River Parkway, are potential areas to consider expanding non-motorized facilities.

Improving Connectivity

The primary trails within the Casper MPA provide very good east-west connections. North-south connections are more difficult in particular in the central portion of City of Casper. There are currently some pathways through parks but no continuous trail facility extending south of 15th Street.

Spot Location Improvements

Spot location improvements will be important to the continued development of the trail system. The following locations are potential areas where improvements should be considered. In some cases, such as Beverly Street, planned improvements have been identified.

- Beverly Street crossing - underpass
- I-25 crossing along Beverly Street
- Wyoming Boulevard crossing on the southern portion of the Casper MPA.
- I-25 crossing into Bar Nunn
- Robertson Road crossing to accommodate potential future expansion of the Platte River Parkway.
- Casper Rail Trail – extending west past Center Street
- Poplar Street Bridge improvements
- Glendale Creek
- Garden Creek

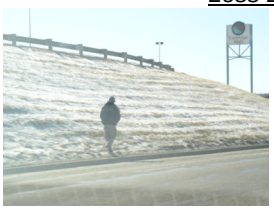
Improving Pedestrian Facilities

On-going maintenance and construction of new sidewalks are important to the Casper MPA. Sidewalks are sometimes the primary mode of transportation while for others sidewalks may serve as the first and last mode of a particular trip. In addition to sidewalks, the presence of benches and other amenities, can make walking a more attractive option to area throughout the Casper MPA.

In terms of sidewalk design, there are generally two types – "attached" and "detached". An "attached" sidewalk is when the sidewalk and curb are connected as a continuous element. Or, stated another way, the sidewalk is located directly next to the roadway. A "detached" sidewalk is when the sidewalk is separated from the curb by a buffer area. "Detached" sidewalks provide a separation between vehicular and pedestrian traffic and are often more aesthetically pleasing as the area between the curb and sidewalk is often landscaped. Figure 3-12 displays areas that encourage walking compared to those that are less desirable.

Figure 3-12. Comparison of Pedestrian Facilities

Less Desirable



2nd Street near the Eastridge Mall, demonstrates the need to adequately accommodate pedestrians.

An example of a school zone with attached sidewalks. In these conditions there is little buffer between vehicles and pedestrians.

More Desirable

The Casper Rail Trail is a good example of creating inviting spaces for pedestrians and recreational users.

An example of attached and detached sidewalks. The attached portion provides a landscaped buffer between the road and sidewalk.

3.5 Future Year Rail Conditions

While freight movement levels are expected to increase over the next twenty-five years, it is not anticipated that this would significantly impact rail operations in the Casper MPA. Currently there are relatively low train volumes and no immediate plans for increasing service. The primary concern related to future rail service is to maintain safe at-grade crossings, including routine maintenance. At this time, and in the foreseeable future, there is not a significant need to construct grade separated facilities. This could however change if plans for constructing high speed rail, linking Casper to Denver and Albuquerque, proceed beyond the planning stages. Recently, the Casper City Council approved funding to study the feasibility of extending high speed rail to Casper.

3.6 Future Year Aviation Conditions

Discussions with Natrona County International Airport indicated no significant future year improvements. The airport terminal was recently renovated and should provide adequate service for commercial airline passengers for many years. If anything, the continued support of commercial airline service is important to the Casper MPA.